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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,974	06/23/2003	Nicholas Mark Alford	348-035	1360
1009	7590	06/22/2005	EXAMINER	
KING & SCHICKLI, PLLC 247 NORTH BROADWAY LEXINGTON, KY 40507			RODRIGUEZ, JOSEPH C	
			ART UNIT	PAPER NUMBER
			3653	
DATE MAILED: 06/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/601,974	Applicant(s) ALFORD ET AL.	
	Examiner Joseph C. Rodriguez	Art Unit 3653	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-6,9,12 and 15-30 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-6,9,12 and 15-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

### **DETAILED ACTION**

The previous final rejection of 4/21/05 has been withdrawn. Claims 2-6, 9, 12, and 15-30 are pending and are treated as follows-

#### ***Specification***

The disclosure is objected to as lacking appropriate section headings as outlined in 37 CFR 1.77. See also 37 CFR 1.72-1.77; MPEP § 608.01(a). Correction is required.

#### ***Claim Objections***

The claims are objected to as the form of claims 12 and 28-30 are improper. Where a claim sets forth a plurality of elements or steps, as in the instant claims, each element or step should be separated by a line indentation. See MPEP 608.01(m) and 37 CFR 1.75(i).

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6, 9 and 15-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 19 and 21, the language "can be" may render the claims indefinite as it is unclear whether the features subsequent to the "can be" language are

a necessary part of the claimed invention. Applicant must positively recite the features of the claimed invention. Examiner thus recommends eliminating all instances of "can be" from the claim language.

Claim 19 recites the limitation "the magnet" (ln. 6, 7). There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the magnet" (ln. 6, 7). There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6, 9, 12, 15, 18-22 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michael et al. ("Michael")(US 2,789,655) in view of Fukumaki (JP 2000317342 A) and Elliot (US 3,712,472).

Michael teaches a magnetic separator (Fig. 2-6) comprising a plurality of tube portions (wherein portion of 42 below baffle 41 can be regarded as a tube portion that is part of a larger tube—i.e., part of tube above 31); a magnetic shuttle (42) movable between a separator position (below 41) and a release position (above 41; col. 5, ln. 4-70) withdrawn from the tube portion, wherein the tubes are arranged in a circular array (col. 4, ln. 14-35). Here, it is implicit from the circular structure of the magnetic

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separator and the similar sizes of the magnetic shuttles that the forces between the magnets (i.e., shuttles) are balanced. Further, as the magnets are not connected, the magnets are regarded as capable of "moving independently of each other".

Michael as set forth above thus teaches all that is claimed except for expressly teaching said magnets movable by differential pressure, wherein each tube has an inlet for receiving a fluid to create differential pressure and the magnets have seals for sealing against an inner face of the tubes. Michael, however, already teaches the magnetic shuttles movable by mechanical means and, moreover, Elliot (Fig. 2 with fluid inlets near 26, Fig. 13 with sealing members 472; col. 5, ln. 10-col. 6, ln. 54; col. 10, ln. 55-col. 11, ln. 32 teaching that sealing members 472 prevent contamination of tube assemblies) teaches that the use of differential pressure can be regarded as an art recognized equivalent to mechanical means for moving shuttle magnets in the magnetic separating arts. See MPEP 2144.06. Fukumaki also teaches the use of differential pressure to move magnets between a separating and release position (Fig. 1, 3, with fluid inlets 10 at front portion of magnetic tubes 11). Moreover, the use of differential pressure can be seen as a more efficient way of moving the magnets than either mechanical or human means (Fukumaki, English Abstract). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Michael as taught by above as differential pressure is an art recognized equivalent that moves said magnets in an easier fashion, fluid inlets are inherent when moving a device with differential pressure and sealing members prevent the contamination of the tube assembly.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michael et al. ("Michael")(US 2,789,655) in view of Fukumaki (JP 2000317342 A) and Elliot (US 3,712,472) as applied to claims 2-6, 9, 12, 15, 18-22 and 24-30 above, and further in view of Carr (us 4,457,838).

Michael, Elliot and Fukumaki as set forth above teach all that is claimed except for expressly teaching a control apparatus for supplying compressed air to the tube to move the shuttle between its positions. Elliot, however, already teaches the use of a control system (Fig. 2, control system 36, 38, 40; col. Col. 5, ln. 10-60) for supplying hydraulic fluid to move the tubes, wherein air can be regarded as a hydraulic fluid. Further, if air is not regarded as hydraulic fluid, the mere substitution of air for hydraulic fluid can be regarded as an art recognized equivalent in the means for creating differential pressure arts (see Elliot, col. 11, ln. 10-30 teaching that the magnet can be caused to move through the tube "hydraulically, pneumatically, electrically or mechanically"). See MPEP 2144.06. For instance, Carr teaches the use of compressed air to move a slidable magnetic assembly (col. 6, ln. 14-38). Moreover, Carr also teaches that the use of air reduces the need for electric motors for moving said magnets (col. 10, ln. 33-36). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Michael, Elliot and Fukumaki as taught above as a control system provides the common sense benefit of greater control over the fluid flow means and compressed air is a well known substitute for hydraulic fluid.

***Allowable Subject Matter***

Claims 17 and 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any references not explicitly discussed above but made of record are considered relevant to the prosecution of the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Joseph C Rodriguez** whose telephone number is **571-272-6942** (M-F, 9 am – 6 pm, EST).

The **Official** fax phone number for the organization where this application or proceeding is assigned is **703-872-9326** (After-Final **703-972-9327**).

The examiner's **UNOFFICIAL Personal fax number** is **571-273-6942**.

Further, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only.

For more information about the PAIR system, see

**<http://pair-direct.uspto.gov>**

Should you have questions on access to the Private PMR system, contact the Electronic Business Center (EBC) at **866-217-9197** (Toll Free).

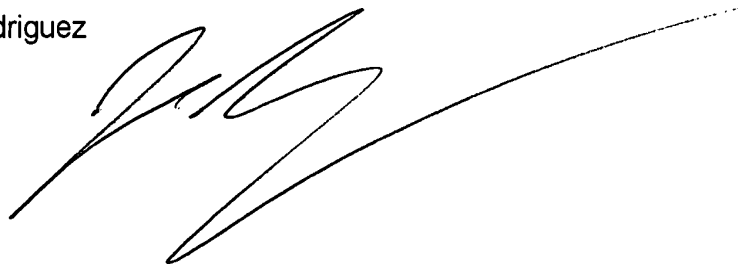
Alternatively, inquiries of a general nature or relating to the status of this application or proceeding can also be directed to the **Receptionist** whose telephone number is **571-272-6584**. Further, the supervisor's contact information is Donald Walsh, 571-272-6944.

Signed by Examiner Joseph Rodriguez

jcr

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June 20, 2005

A large, stylized handwritten signature in black ink, likely belonging to Joseph Rodriguez, is positioned to the right of the typed name and date.